

DOES DISTANCE EDUCATION LEAD TO HIGHER LEVELS OF COGNITION?

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ABSTRACT

Due to increased globalization, the need for traditional teaching and learning methods are declining. Research predicts an increase in student enrolments in future without sufficient funding, thus driving academic institutions to meet the growing economies of scale through distance education. Studies also report that both educators and learners need to develop their skills sufficiently to meet new and different challenges ahead. However, the educational value of distance education is not fully realized. The need to meet the fundamental requirements of distance education is becoming increasingly important to meet future educational trends and academic success. This paper questions the effectiveness of distance education from a cognitive perspective and discusses the need for the development of metacognitive abilities for both educators and learners in light of the changing trends.

KEYWORDS

Distance, education, consciousness, metacognition, sustainability, behaviour

1. INTRODUCTION

Due to increased globalisation and the use of information communication and technology (ICT), the institutional landscape of higher education is changing. Traditional campuses are declining and it is believed that there will be less need for them in the future (Lorenzetti, 2003). Globalisation is contributing to student mobility and so attending lectures in traditional learning areas is becoming challenging. Research predicts a dramatic increase in student enrolments in the coming years without sufficient government funding, thus leaving academic institutions to find alternative means to deal with the increased demand in the most cost-effective way possible (Sizoo et al., 2003; Rubiales, 1998; Lorenzetti, 2003). It is expected that academic institutions will look towards distance education to deal with the future demand (Rubiales, 1998) through outsourcing and partnerships (Lorenzetti, 2003). Furthermore, amidst geopolitical challenges around the world, distance education is appealing to learners as it offers minimal personal risk and cost. Guri-Rosenblit (2005) believes more younger students will be drawn towards distance education in future. The flexibility of distance education mixed with e-learning makes distance education favourable as it supports the growing educational trends in the international markets (Guri-Rosenblit, 2005).

In light of the educational trends, this paper questions about the effectiveness of distance education from a cognitive perspective. Does distance education contribute to higher levels of cognition?

2. HIGHER COGNITION

Achieving higher levels of cognition is akin to achieving higher consciousness. According to the New Zealand Oxford Dictionary, *consciousness* refers to one's mental faculties being awake or the "awareness of one's surroundings and identity" (2002, p. 161). Therefore higher consciousness refers to increased or elevated awareness of one's surroundings.

2.1 The Need to Awaken

Over the centuries, there has been a gradual awakening of consciousness in the world leading to higher cognition (Self-Knowledge, 2004). Jalalu'ddin Rumi, a philosopher in the 13th century describes the evolutionary process as starting "... from the deep sleep in the inorganic world, then stirring in the plant world, dreaming in the animal world and beginning to awaken fully in the higher primates and man ..." (Self-Knowledge, 2004, p. 2). Many researchers have called for the inner awakening as a way to address the various barriers in society. Vivekananda, a philosopher in the 19th century called for the awakening of humankind in his time (His Eastern and Western Disciples, 2005). Now in the 21st century, this calling still prevails. Kamla Chowdhry (2003), the Earth Charter Commissioner believes an inner awakening is required to achieve the Millennium Development Goals in the 21st century. How we achieve inner awakening and what must be done are some of the challenges that need to be faced but without creating the experience of self-realisation at a personal level, the task of stimulating reflection for self-transformation would be practically impossible. According to von Wright (1992), learning activities need to be structured in a way that will develop reflective learning and metacognitive capabilities. This will provide the basis for developing meaning and understanding from the learning material which will contribute to inner awakening.

2.2 Awareness

Education has played a significant role in raising student awareness. Harris (2005, p. 1) defines awareness as "more than just knowing something". He believes the stage of awareness is transformative in itself. Since the "goal of multicultural education is to contribute proactively to the transformation of society ..." (Gorski, 2005, p. 14), it is important that the task of raising awareness is actively addressed. However, the challenge is about how to achieve increased *awareness* to facilitate and expand learning in the best way possible. The need to expand learning is supported by the Earth Charter which challenges us "to expand our moral awareness and to respect the value of all living beings ..." (Clugston et al., 2002, p. 3) but if learning is about gaining knowledge or knowing more about a subject matter, then it could be argued that when awareness increases, learning also increases.

According to McCloskey (2007), silence is one way to achieve increased awareness as it nourishes and propels all life forms to arise, awaken and be. Silence provides the opportunity to reflect on life's experiences (Kessler, 2000, p. 14, cited in Huitt & Robbins, 2003) as it provides a conducive state to gain self-awareness.

2.3 Metacognition

So how does self-awareness relate to metacognition? Metacognition is defined as, "one's knowledge concerning one's own cognitive processes or anything related to them" (Worrall & Bell, 2007, p. 163). Flavell (1979, cited in Worrall & Bell, 2007, p. 163) argues that, "metacognitive processes are affected by person variables (of individual and group knowledge), task variables (of nature and difficulty of learning tasks) and strategy variables (of how to best approach learning tasks)". Depending on how these variables are interwoven in the assessment activities, metacognitive capabilities can be enhanced to facilitate deep transformative learning (von Wright, 1992). However, metacognitive processes must be tied to personal experiences with the support of wisdom related knowledge so that the experiences can be evaluated against the knowledge provided for self-transformation. According to Reeves's Original Model of web-based learning, schema, propositions, rules and skills can help to build knowledge and skills for high order outcomes (Reeves, 1997, cited in Worrall & Bell, 2007). So a combination of these factors could contribute towards building metacognitive processes.

3. TRENDS

Educational trends show an increased delivery of online education, particularly in Asia where countries are embracing the changing shape of learning with the realisation that tremendous cost savings can be achieved by reducing the high cost of reproducing the same course material in print-based form (Hedberg & Lim, 2004). Trends also show emerging technologies that offer flexibility and autonomy for collaboration through engaging learning environments (Beldarrain, 2006). It is also believed that the 21st century learner is more likely to work collaboratively and so there is increased need to share resources via digital libraries (Hedberg

& Lim, 2004). This makes sense considering there has been a rapid growth of Internet usage over the years, thus making the Internet a popular and flexible environment for online collaborative work.

3.1 Distance Education

According to Godon (2004), “education presupposes a kind of silence or withdrawal from action” (p. 598) which is a significant aspect of distance education because tutors and learners are physically separated from each other by space and time (Guri-Rosenblit, 2005; Worrall & Bell, 2007). In relating distance education to self-awareness, the silence from the ‘distance’ withdraws one from speech and action, thus allowing opportunities for reflection, cognitive development and independent decision-making.

Web-based courses are instructionally designed with an element of intuitive navigation that drives the learning process. If the degree of self-direction fuelled by intuition is developed, then self-management skills for improved learning can be enhanced. However, the elements of intuition is difficult to address as it is deeply internalised (Haldin-Herrgard, 2000). Therefore, regular inward journeys are useful to develop self-awareness, which contributes towards self-directedness required for distance education.

4. DEVELOPMENT OF LEARNERS

Self-management skills and self-directedness are clearly pre-requisite skills for “effective learning in distance education” (Warner et al., 1998 cited in Smith et al., 2003, p. 63). If educational trends show increased online education, then it is essential that learners develop pre-requisite skills to benefit from distance learning environments (Sizoo et al., 2003; MacDonald, 2002). However, this is dependent on the degree of self-reflection carried out and if developed well can create the independence needed for successful learning. Research shows that successful distance learners tended to be “more intelligent, emotionally stable, trusting, compulsive, passive and conforming than traditional students” (Biner et al., 1995, cited in Thompson, 1998). Having an internal locus of control was positively correlated with successful learning whereas an external locus of control was a strong characteristic for withdrawals or failure (Pugliese, 1994, cited in Thompson, 1998). However, Perry (1970, cited in MacDonald, 2002, p. 2) believes developing any independence and self-direction in learning is a “lengthy and gradual process”. Face-to-face learners may perceive distance education as ineffective or challenging especially if they lack self-directedness and self-management skills. Biner et al. (1995, cited in St. Pierre, 1998) discovered that many of the distance learners lacked self-directedness and withdrawal rates were high. They also lacked autonomous online learning skills and had little confidence and experience with web-based learning which affect student participation and learning (Smith et al., 2003). This explains the radical shift of instructional design towards more flexible and engaging learning-centered environments with the use of social software (Beldarrain, 2006).

5. DEVELOPMENT OF EDUCATORS

The fundamental task of teaching is not just about transmitting information but to elevate learners to a higher level of understanding or consciousness. Sternberg (2001) points out that the IQ of learners increase by 9 points for each generation and so it is essential for educators to equip themselves sufficiently to deal with new or different challenges in future. The Australian Association for Research in Education (n. d., p. 2) recognises on-going development of teachers to be vital for continued improvement of teaching practices and learning. It is believed that technology platforms are likely to become increasingly intuitive in support of new educational paradigms offering flexibility and creativity in the teaching-learning environments (Carneiro, 2007). Flexible learning approaches using technology can create paradigms for new forms of education and teaching models to be developed. Carneiro (2007, p. 165) highlights that there is a need for “a more inclusive societal pattern of human relationship” and believes that this could be achieved through the support of holistic and inclusive knowledge to draw desirable behavioural patterns for social well-being and cultural coherence. It is not clear why such knowledge is not actively incorporated in courses for sustainable development and transformation (Natanasabapathy, 2007). The central goal of Partnerships for Sustainable

Development “is aimed at capacity building of human resources through targeted education and training programs” (2002, p. 3). Therefore, it is important that knowledge associated with building human capacity be integrated in all disciplines. Liebowitz (2003) believes organisational and behavioural skills can be learnt online. If this is the case, then the development of technologies can bring about diverse opportunities for e-learning.

6. E-LEARNING DEVELOPMENT

While studies on e-learning have shown significant cost reductions and opportunities for improved learning (Syberworks, 2007), Fox & MacKeogh (2003) argue that e-learning is more expensive to deliver than conventional distance teaching methods. However Syberworks (2007) report that it is only expensive initially but savings can grow up to 50% with a return on investment (ROI) of 50-60% higher than traditional training methods. The training time using e-learning is also reduced by 40% (Syberworks, 2007). Studies also show convincing evidence that critical thinking and having a reflective dialogue using appropriate pedagogical designs lead to higher levels of cognition (Fox & MacKeogh, 2003). While MacDonald (2002, p. 9) believes e-learning exposes students “to a more demanding approach of study”, Syberworks (2007) report that there is a 15-25% improvement in retention and application of knowledge with e-learning. Therefore from the perspective of cognitive development, it can be argued that there is significant educational value in investing into e-learning initiatives.

7. CONCLUSION

Overall, trends show that distance education will be increasingly popular in the future. The need to meet the fundamental requirements of distance education is therefore vital. While the attributes of self-directedness and self-management for academic success may be perceived as demanding, the educational value of distance education is significant. Research shows that the pedagogical dynamics of distance education contribute to high order learning with an overall reduction in costs and improvements in the quality and learning time. Both educators and learners have the responsibility to equip themselves sufficiently to meet the new challenges in the future. As the task of raising self-awareness is an integral part of the learning process, the need to awaken and build awareness as a step in the process towards building human capacity is essential for sustainable development and transformation.

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